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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/647,170	08/21/2003	Toshiyuki Takabayashi	03487/HG	1777

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FRISHAUF, HOLTZ, GOODMAN & CHICK, PC  
220 5TH AVE FL 16  
NEW YORK, NY 10001-7708

EXAMINER

BERMAN, SUSAN W

ART UNIT	PAPER NUMBER
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1711

DATE MAILED: 07/26/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b>	<b>Applicant(s)</b>	
	10/647,170	TAKABAYASHI, TOSHIYUKI	
	<b>Examiner</b>	<b>Art Unit</b>	
	Susan W. Berman	1711	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 09 June 2005.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 1,3-6 and 8-20 is/are pending in the application.
- 4a) Of the above claim(s) 13-20 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1,3-6 and 8-12 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 21 August 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some \*    c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |   |   |
|---|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)                        | 4) <input type="checkbox"/> Interview Summary (PTO-413)                     |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)    | Paper No(s)/Mail Date. _____  |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date _____   | 6) <input type="checkbox"/> Other: _____                                    |

***Election/Restrictions***

Applicant's election of Group I, claims 1-12 in the reply filed on 06/09/2004 is acknowledged. Because applicant did not distinctly and specifically point out the supposed errors in the restriction requirement, the election has been treated as an election without traverse (MPEP § 818.03(a)).

This application contains claims 13-20 drawn to an invention nonelected without traverse. A complete reply to the final rejection must include cancellation of nonelected claims or other appropriate action (37 CFR 1.144) See MPEP § 821.01.

***Response to Amendment***

The rejection of claims 1-12 under 35 U.S.C. 112, second paragraph, is withdrawn in response to the amended claims submitted 06/09/2005.

The rejection of claims 1, 3-6 and 8-12 as being anticipated by HIRAI et al (6,846,074) is withdrawn. The oxetane compounds similar to the oxetane compounds set forth in instant claims 1 and 3 that are disclosed by Hirai et al are compounds wherein the substituents on the carbon atoms bonded to the oxygen are simultaneously hydrogen and, thus differ from the oxetane compounds in the amended claims.

The rejection of claims 1, 3, 4, 6, 8, 9, 11 and 12 as being anticipated by IGARASHI et al (5,674,922) is withdrawn. The oxetane compounds similar to the oxetane compounds set forth in instant claim 1 that are disclosed by Igarashi et al are compounds wherein the substituents on the carbon atoms bonded to the oxygen are simultaneously hydrogen and, thus differ from the oxetane compounds in the amended claims.

The rejection of claims 1, 3, 4, 6, 8 and 9 as being anticipated by KURIYAMA et al (6,365,760) is withdrawn. Kuriyama et al do not disclose oxetanyl-containing naphthalene or biphenyl compounds

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wherein the substituents on the carbon atoms bonded to the oxygen are not simultaneously hydrogen, as now set forth in claims 1, 6, 11 and 12.

***Response to Arguments***

The rejection of claims 1-2 and 6-7 as being anticipated by US Publication No. 2004/0023157 (FEIRING et al) is withdrawn in response to applicant's arguments for reconsideration. It is agreed that the oxetane compounds of formula II disclosed by Feiring et al differ from the instantly claimed oxetane compounds.

Applicant's arguments filed 06/09/2005 have been fully considered but they are not persuasive. The Declaration under 37 CFR 1.132 of Toshiyuki Takabayashi filed 06/09/2005 has been considered but found unpersuasive. The evidence presented in the Declaration shows C-O bond length and charge on the O is different for oxetane compounds wherein substituents R<sub>3</sub> to R<sub>6</sub> are simultaneously hydrogen compared with oxetane compounds wherein substituents R<sub>3</sub> to R<sub>6</sub> are not simultaneously hydrogen (according to the invention). However, the evidence is not persuasive because Smith and Sasaki et al each teach to oxetane compounds wherein substituents R<sub>3</sub> to R<sub>6</sub> are not simultaneously hydrogen, as set forth in the instant claims. Applicant has not provided any evidence to show that selection of only oxetane compounds wherein substituents R<sub>3</sub> to R<sub>6</sub> are not simultaneously hydrogen provides unexpected results in the instantly claimed compositions compared with compositions comprising oxetane compounds wherein substituents R<sub>3</sub> to R<sub>6</sub> are simultaneously hydrogen.

***Claim Rejections - 35 USC § 102/103***

The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

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Claims 1, 6, 11 and 12 are rejected under 35 U.S.C. 102(b) as being anticipated by or, alternatively, under 35 U.S.C. 103(a) as being obvious over SMITH (4,394,403). Smith discloses compositions comprising an oxetane compound of the formula set forth in column 6, lines 21-38, which corresponds to the formula set forth in claim 1 or in claim 6 wherein the R groups are selected from hydrogen, alkyl, fluoroalkyl or aryl groups. Epoxy compounds and mixtures of cationically curable compounds, as well as pigments, are also taught (column 4, lines 45-47, column 6, lines 47-55, and column 7, line 1). Applications in graphic arts are taught in column 7, lines 3-20. Ink jet printing and the necessary viscosities for ink jet printing are not mentioned. Smith discloses compositions comprising oxetane compounds wherein the R groups are not simultaneously hydrogen, thus providing an oxetane compound as set forth in the instant claims and anticipating the instant claims. Smith does not mention C-O bond lengths in the oxetane compounds or charge on the oxygen atom, however, since the species of the disclosed compounds and species of the claimed compounds overlap, it would be expected that these properties would be inherent to the species disclosed, in the absence of evidence to the contrary. Alternatively, It would have been obvious to one skilled in the art at the time of the invention to select an oxetane compound wherein the R groups are not simultaneously hydrogen from the oxetane compounds disclosed by Smith to provide a photopolymerizable composition, as taught by Smith. One of ordinary skill in the art at the time of the invention would have been motivated by a reasonable expectation of successfully providing a useful photopolymerizable compositions for coating substrates and bonding materials, as taught by Smith.

Claims 1, 3, 4, 6, 8 and 9 are rejected under 35 U.S.C. 102(e) as being anticipated by SASAKI et al (6,794,451). Sasaki et al disclose compositions comprising an oxetane compound of formulas 5, 3 or 7 set forth in column 5, lines 1-22, and column 6, lines 8-49, which corresponds to the formula set forth in claim 1 or in claim 6 wherein the R groups are selected from hydrogen, alkyl, or aryl groups. Epoxy compounds, polyfunctional oxetane or epoxy monomers, mixtures of cationically curable compounds and

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onium salts initiators are also taught (column 6, lines 50-65, column 6, line 47, to column 8, line 67). Ink jet printing and the necessary viscosities for ink jet printing are not mentioned. Sasaki et al disclose compositions comprising oxetane compounds wherein the R groups are not simultaneously hydrogen, thus providing an oxetane compound as set forth in the instant claims and anticipating the instant claims. Sasaki et al do not mention C-O bond lengths in the oxetane compounds or charge on the oxygen atom, however, since the species of the disclosed compounds and species of the claimed compounds overlap, it would be expected that these properties would be inherent to the species disclosed, in the absence of evidence to the contrary. Alternatively, It would have been obvious to one skilled in the art at the time of the invention to select an oxetane compound wherein the R groups are not simultaneously hydrogen from the oxetane compounds disclosed by Sasaki et al to provide a cationically polymerizable composition and tacky polymer, as taught by Sasaki et al. One of ordinary skill in the art at the time of the invention would have been motivated by a reasonable expectation of successfully providing a useful cationically polymerizable composition for obtaining a tacky polymer useful in a pressure sensitive adhesive, as taught by Sasaki et al.

Claims 5 and 10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Smith or Sasaki et al in combination with HIRAI (6,846,074). Hirai disclose compositions for ink jet printing comprising an oxetane compound of formula 1 set forth in column 7, line 28, to column 8, line 8, preferred for obtaining a composition excellent in adhesiveness and low viscosity. Di-functional oxetane compounds are taught in column 8-11. Epoxy compounds and mixtures of cationically curable compounds are also taught (column 6, line 38, to column 7, line 10). Photoacid generators and addition of pigment are taught in column 11, line 57, to column 12, line 23. See Table 11, Ink set A. Ink jet printing and the necessary viscosities for ink jet printing are taught in column 2, lines 1-3. The oxetane compounds exemplified by Hirai are compounds wherein the R groups corresponding to R<sub>3</sub> to R<sub>6</sub> in the instantly claimed oxetane

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formula are all hydrogen. It would have been obvious to one skilled in the art at the time of the invention to adjust the viscosities of the compositions disclosed by Smith or Sasaki et al to provide viscosities within the instantly claimed range in order to provide compositions useful for ink jet printing, as taught by Hirai et al in analogous compositions.

### *Double Patenting*

The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and, *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

Claims 1, 3-6 and 8-12 are provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-7 of copending Application No. 10/648579 (Publication No. 2004/0052968) in view of Smith or Sasaki et al. Although the conflicting claims are not identical, they are not patentably distinct from each other for the following reasons. Claims 1-7 of SN '579 set forth compositions comprising a photoacid generating agent and an oxetane compound or mixtures of oxetane, epoxy and/or vinyl ether compounds, with or without a pigment and having the same viscosity as the compositions set forth in the instant claims. It would have been obvious to one skilled in the art at the time of the invention to employ an oxetane compound corresponding to formula 1 as disclosed by Smith or by Sasaki et al as the oxetane compound in the compositions claimed in SN '579. Smith provides motivation by teaching that the compounds provide useful mixtures of cationically polymerizable materials with adhesive and coating properties (see column 6). Sasaki et al provide

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motivation by teaching that the oxetane compounds provide compositions having low viscosity, ease of coating and high polymerizability in air (column 2, lines 44-67).

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

### *Conclusion*

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

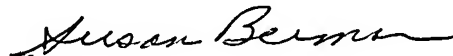
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Susan W. Berman whose telephone number is 571 272 1067. The examiner can normally be reached on M-F 9:30-6:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, James Seidleck can be reached on 571 272 1078. The fax phone number for the organization where this application or proceeding is assigned is 571 273 8300.



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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Susan W Berman  
Primary Examiner  
Art Unit 1711

SB  
7/25/05